AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. **(currently amended)** [[An]] A switch controlling apparatus for controlling a radio frequency (RF) switch of a satellite transponder for multibeam communication, said apparatus ~~which will be referred to as a switch controlling apparatus herein,~~ comprising:

an earth control station interfacing [[means]] unit comprising:

a controller for receiving ~~and processing~~ control commands transmitted over an uplink from an earth control station, analyzing the commands and transmitting the commands to corresponding parts of the switch controlling apparatus; and

a monitoring unit for periodically collecting operation states of modules in the switch controlling apparatus and reporting the operation states to the earth control station so that the operation states of the switch controlling apparatus can be monitored in the earth control station;

a reference frequency generating [[means]] unit for generating a reference clock needed to operate the switch controlling apparatus and for generating a reference frequency needed for the operation of the switch controlling apparatus based on the reference clock; and

a switch controlling [[means]] unit for reading contents of a memory that stores a switching sequence periodically, detecting and correcting an error of the contents to generate a switch control signal, and transmitting the switch control signal to ~~a radio frequency (RF)~~ said RF switch.

2. (canceled)

3. **(currently amended)** The switch controlling apparatus as recited in claim 1, wherein the reference frequency generating ~~means includes~~ unit comprises:

a reference clock generator which is formed of a voltage control crystal oscillator (VCXO) for generating highly stable clocks and is arranged, upon receipt of ~~receives~~ frequency control data from [[an]] the earth control station, to ~~thereby~~ correct a phase difference from clocks of the earth control station; and

a reference frequency generator for generating various synchronization signals needed to operate the switch controlling apparatus based on the clocks generated in the reference clock generator.

4. **(currently amended)** A switch controlling apparatus for controlling a radio frequency (RF) switch of a satellite transponder for multibeam communication, said apparatus comprising:

an earth control station interfacing unit for receiving and processing commands from an earth control station, collecting operation states of the switch controlling apparatus and reporting the operation states to the earth control station;

a reference frequency generating unit for generating a reference clock needed to operate the switch controlling apparatus and for generating a reference frequency needed for the operation of the switch controlling apparatus based on the reference clock; and

a switch controlling unit for reading contents of a memory that stores a switching sequence periodically, detecting and correcting an error of the contents to generate a switch control signal, and transmitting the switch control signal to said RF switch;

wherein the reference frequency generating unit comprises:

a reference clock generator which is formed of a voltage control crystal oscillator (VCXO) for generating highly stable clocks and is arranged, upon receipt of frequency control data from the earth control station, to correct a phase

difference from clocks of the earth control station; and

a reference frequency generator for generating various synchronization signals needed to operate the switch controlling apparatus based on the clocks generated in the reference clock generator; and

~~The switch controlling apparatus as recited in claim 3,~~ wherein the switch ~~controlling means includes~~ controlling unit comprises:

a memory interface unit for reading switching data stored in a duplexer and writing updated switching data transmitted over an uplink ~~upwardly~~ from the earth control station in the duplexer;

the duplexer for performing duplexing to operate a preparatory memory when a main memory is out of order during signal transmission/reception with the memory interface unit;

a switching signal processor for preventing an error in a switching signal to be transmitted to the RF switch;

an output controller for transmitting the switching signal to the RF switch;

an operation frequency generator for generating an operation time needed for the operation of the switch controlling apparatus based on the clock and synchronization signals generated in the reference frequency ~~generating means~~ generating unit; and

a memory controller for synchronizing data communication with the duplexer by controlling the operation of the memory interface unit.

5. **(currently amended)** A method [[for]] of controlling a radio frequency (RF) switch ~~which is applied to an apparatus for controlling a switch~~ of a satellite transponder, ~~which will be referred to as~~ using a switch controlling apparatus, the method comprising ~~which comprises~~ the steps [[of]] in which:

~~a) receiving and processing~~ a controller of an earth control station interfacing unit of the

switch controlling apparatus receives control commands transmitted over an uplink from an earth control station, analyzes the commands and transmits the commands to corresponding parts of the switch controlling apparatus;

a monitoring unit of the earth control station interfacing unit of the switch controlling apparatus periodically collects ~~collecting~~ operation states of modules in the switch controlling apparatus and reports ~~reporting~~ the operation states to the earth control station so that the operation states of the switch controlling apparatus can be monitored in the earth control station;

~~b) generating~~ a reference frequency generating unit of the switch controlling apparatus generates a reference clock needed to operate the switch controlling apparatus and ~~generating~~ a reference frequency needed for the operation of the switch controlling apparatus based on the reference clock; and

~~c) reading~~ a switch controlling unit of the switch controlling apparatus reads contents of a memory that stores a switching sequence periodically, detects and corrects ~~detecting and correcting~~ an error of the contents to generate a switch control signal, and transmits ~~transmitting~~ the switch control signal to ~~a radio frequency (RF)~~ said RF switch.

6. **(new)** The method of claim 5, wherein, in the reference frequency generating unit,

a reference clock generator generates, by a voltage control crystal oscillator (VCXO), highly stable clocks and corrects, upon receipt of frequency control data from the earth control station, a phase difference from clocks of the earth control station; and

a reference frequency generator generates various synchronization signals needed to operate the switch controlling apparatus based on the clocks generated in the reference clock generator.

7. **(new)** The method of claim 6, wherein, in the switch controlling unit,

a memory interface unit reads switching data stored in a duplexer and writes updated switching data transmitted over the uplink from the earth control station in the duplexer;

the duplexer performs duplexing to operate a preparatory memory when a main memory is

out of order during signal transmission/reception with the memory interface unit;

a switching signal processor operates to prevent an error in a switching signal to be transmitted to the RF switch;

an output controller transmits the switching signal to the RF switch;

an operation frequency generator generates an operation time needed for the operation of the switch controlling apparatus based on the clock and synchronization signals generated in the reference frequency generating unit; and

a memory controller synchronizes data communication with the duplexer by controlling the operation of the memory interface unit.